Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-41 are pending in the application, with claims 1, 14, 27, 40, and 41 being the independent claims. Claims 1, 5, 13, 14, 18, 20, 26, 27, 31, and 39-41 are sought to be amended. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 102

The Board of Patent Appeals and Interferences ("Board") has affirmed the Examiner's rejection of claims 1-12, 14-25, 27-38, and 41 under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,815,727 to Motomura ("Motomura"). Applicants seek to amend independent claims 1, 14, 27, and 41 to clarify the claimed subject matter, and respectfully request that the rejection be reconsidered and withdrawn.

Amended claim 1 recites, *inter alia*, a "processing slice" comprising:

> an instruction resource unit to perform a register operation specified in a first instruction dispatched from a first of the plurality of threads; and
>
> a peripheral unit interface to send a command message specifying a peripheral operation to a peripheral unit over the peripheral bus responsive to a second instruction dispatch from a second of the plurality of threads;
>
> wherein the instruction resource unit and peripheral unit interface execute the first and second instructions concurrently during a same clock cycle.

Applicants submit that Motomura nowhere teaches or suggests "an instruction resource unit" and "a peripheral unit interface" that are responsive to first and second instructions from first and second threads, respectively, and that also "execute the first and second instructions concurrently during a same clock cycle," as recited in claim 1.

The Board provides the following guidance regarding claim interpretation:

> After considering the record before us, we note that the Examiner is reading the claimed "processing slice" on Motomura's parallel processor system 100 (Ans. 15, ¶3). The Examiner is also reading the claimed "functional unit" on Motomura's processor(s) 110 (*Id.*). Both of these elements are shown in Motomura's Figure 1. (Decision on Appeal, p. 8).

Applicants have amended claim 1 to recite an "instruction resource unit" instead of the previously claimed "functional unit" in order to clarify the claim scope. This is discussed in more detail at page 8, line 10 of the Instant Specification. Although Applicants do not acquiesce, the Board has interpreted the processors 110 of Motomura as functionally equivalent, in that they are "capable of performing the claimed function of performing a register operation specified in the instructions dispatched from each of the plurality of threads." (Decision on Appeal, p. 8). Since Motomura discloses a plurality of processors 110, the Board states that the processor system of Motomura is able to "execute instructions in parallel." (Decision on Appeal, p. 10).

Assuming, *arguendo*, that the processors of Motomura read on the "instruction resource unit" of claim 1, Motomura does not also teach a "peripheral unit interface" which executes a second instruction from a second thread "concurrently during a same clock cycle" with the execution of a first instruction from a first thread by the instruction resource unit. The processors of Motomura cannot reasonably be interpreted to be both an "instruction resource unit" and a "peripheral unit interface," as recited in claim 1.

Applicants have acquiesced to the reasonableness of a peripheral unit being inherently coupled to the parallel processor system of Motomura. (Decision on Appeal, p. 5). However, there is no teaching or suggestion anywhere in Motomura regarding the parallel operation of a "peripheral unit *interface*" with an "instruction resource unit."

Accordingly, Applicants believe claim 1 as amended addresses the Examiner's rejection, as well as the Board's decision, such that claim 1 is not anticipated by Motomura. Claims 2-12 are also not anticipated by Motomura for at least the same reasons as claim 1, from which they depend, and further in view of their respective features. Applicants therefore respectfully submit that claims 1-12 are in condition for allowance, and request reconsideration and withdrawal of the rejection of claims 1-12.

Independent claims 14, 27, and 41 have been amended to recite similar features as independent claim 1, and are therefore also not anticipated by Motomura for at least the same reasons as claim 1. Additionally, claims 15-25 and 28-38 are also not anticipated by Motomura for at least the same reasons as claims 14 and 27, from which they respectively depend, and further in view of their own respective features. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 14-25, 27-38, and 41.

Rejections under 35 U.S.C. § 103

The Board has affirmed the Examiner's rejection of claims 13, 26, and 39 under 35 U.S.C. § 103(a) as allegedly being obvious over Motomura in view of U.S. Patent No. 5,418,917 to Hiraoka et al. ("Hiraoka").

Hiraoka does not overcome the deficiencies of Motomura relative to independent claims 1, 14, and 27 described above, and neither the Examiner nor the Board cite Hiraoka for that purpose. Claims 13, 26, and 39 depend from claims 1, 14, and 27, respectively. For at least these reasons, and further in view of their own respective features, claims 13, 26, and 39 are patentable over Motomura and Hiraoka.

The Board has further affirmed the Examiner's rejection of claim 40 under 35 U.S.C. § 103(a) as allegedly being obvious over Motomura in view of U.S. Patent No. 5,938,765 to Dove et al. ("Dove"). Claim 40 has been amended to recite similar features as claims 1, 14, 27, and 41. Motomura does not teach or suggest these features, as previously discussed with regard to claims 1, 14, 27, and 41. Moreover, Dove does not supply the missing teaching, and neither the Examiner nor the Board cite Dove for that purpose. For at least these reasons, claim 40 is patentable over Motomura and Dove.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Final Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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